A U M

One moment in eternity is of as great consequence as another moment, for eternity changes not, neither is one part better than another part. —ZOROASTER.

THEOSOPHY

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THREE QUESTIONS

THE humblest of men can reverence the reality of that in him he calls his "self." Nor is any human being, however low in station, debarred from acting as he sees fit—according to the law as he understands it. And no man lives without desire, without a hunger or inchoate longing that that which is shall be made better, that his labors shall bear fruit.

These are the eternal truths of man's *soul* existence, lacking which no understanding of the human being is possible. Wherever there is man, be he pariah or Buddha, there is a being capable of Self-Knowledge, capable of action, capable of envisioning an objective to his actions. The Buddha has realized his potentialities, but he is no more a *man* than the suffering outcaste. Fire is fire, whether it sputter tremulously at a splinter's end, or roar in the holocaust of a mighty furnace. Fire is fire, and man is man; the *great* man, the Mahatma, is one who has extended his humanity until he lives and breathes in all, as all of nature lives and breathes in him.

Three questions Life asks of every man, which only he can answer. Who are you? Where are you going? How are you going? No one can tell another these three secrets, because each one is for himself the mystery, the veil, and the holy of holies.

When a man knows the first answer, he forgets himself. When he learns the second, he sees as one his origin, his path, his destination. And then he needs no more to find the way, for wherever the path extends, he is there.

Before these questions can be answered, they must be heard. Nature writes them in every blade of grass, in every drop of moisture; they are inscribed in the very texture of existence. But only the soul can read them aloud to the wondering mind.

Theosophy can say, There are three questions. Theosophy can say, Each man must ask and find the answers for himself. Theosophy can say, There are those who Know. But to hear the Song of Life is not enough. It is not even a beginning. *We have to sing.*

GREAT THEOSOPHISTS

The Neoplatonic Revival

In the year 527, when the Emperor Justinian closed the Neoplatonic School in Athens and banished the last seven great Neoplatonists, the teachings of Plato and the Neoplatonists disappeared from Christian Europe for almost a thousand years. In the fifteenth century a revival of Neoplatonism arose through the efforts of Nicolas de Cusa, a Catholic Cardinal of German birth. Directly opposing the personal God of the Church, Cusa defined Deity as "the absolute Maximum and also the absolute minimum, who comprehends all that is or can be." This laid him open to the charge of pantheism, which he did not deny. He also declared that Deity can be apprehended only through *intuition,* an exalted state of consciousness in which all limitations disappear. Cusa's efforts to revive Neoplatonism were continued in Germany by Reuchlin, Trithemius and Cornelius Agrippa, and in France by Bovillus. The chief stronghold of the Neoplatonic revival, however, was the city of Florence, where Theosophical principles reappeared under the protection of the powerful house of Medici.

In 1438 Cosmo de Medici made the acquaintance of Gemisthus Pletho, an ardent Platonist, who inspired him with the idea of founding a Platonic Academy in Florence. With this end in view, Cosmo selected Marsilio Ficino, the son of his chief physician, and provided for his education in Greek philosophy. Ficino's natural aptitude was so great that he was able to complete his first work on the Platonic Institutions when he was only twenty-three years old. At the age of thirty, after translating the Theogony of Hesiod, the Hymns of Proclus, Orpheus and Homer, and all of the works of Hermes Trismegistus that could be found, Ficino began his translations of Plato. When that was finished, he turned to the Neoplatonic writers, and left behind him excellent translations of Plotinus, Iamblicus, Proclus and Synesius as his contribution to the work of the Theosophical Movement.

When Cosmo de Medici's grandson Lorenzo was eight years old, Ficino became his tutor, and embued him with a deep reverence for the Greeks. After Lorenzo became the head of the house of Medici he brought his grandfather's plans to completion. He founded a great University in Pisa, established public libraries for his people, and made many valuable additions to the Lorentian

Library which by this time contained a collection of ancient manuscripts second to none in Europe. He raised the Platonic Academy to a high standard of excellence and founded an Academy in the gardens of San Marco where the finest examples of ancient art were displayed for the benefit of students. Here Lorenzo spent many happy afternoons, watching the work of Botticelli and Michaelangelo, and listening to the words of Leonardo da Vinci, whose ideas about flying machines interested him as much as his discussions on art.

On the hills of Fiesole, just outside of Florence, Lorenzo had a beautiful villa which was surrounded by a colony of writers and scholars. One day a visitor arrived, a handsome young man of twenty-one who was already a prominent figure in the world of thought. He was Giovanni Pico, a younger son of the Prince of Mirandola. Although, to quote his nephew, Pico was "still a child and beardless," he had already acquired proficiency in twenty-two languages, had been initiated into the Chaldean, Hebrew and Arabian Mysteries, and had come under the notice of the "Brothers of the Snowy Range" in far-off Tibet. On the day of his arrival in Fiesole, the whole colony gathered around him to hear why he had left Rome so precipitously. He told them that he had become thoroughly disgusted with the ignorance displayed by the heads of the Church. He had published a series of 900 questions addressed to the Church and had invited scholars from all over Europe to be present at the debate. The intellectual leaders of the Church, after carefully examining these questions, decided that thirteen of them contained heretical statements. These were sent to the Pope, who immediately issued a bull against the young nobleman. Pico left for the more congenial atmosphere of Florence.

Lorenzo and Ficino decided that Pico would be a valuable addition to their Academy. Through the united efforts of these three the revival of Neoplatonism made rapid headway. Mirandola, who was a devoted student of Plotinus, persuaded Ficino to translate the *Enneads,* the influence of which appears in Mirandola's own description of God:

> God is not Being; rather is He the *Cause* of Being. As the one primal Fountain of Being, He is properly described as the ONE. God is all things, the abstract Universal Unity of all things in their perfection. To even think or speak of God is profanity. (*De Auro,* Sir Thomas More's Translation.)

Pico della Mirandola died in his thirty-first year, and Marsilio Ficino followed him six years later. After the death of Lorenzo the

Magnificent the Platonic Academy went out of existence. In its place arose a mystical Fraternity, the *Fratres Lucis,* or *Brothers of Light,* which was founded in Florence in 1498. In spite of the persecution of the Inquisition, this Order was still alive in the eighteenth century, numbering among its members such men as Paschalis, Cagliostro, Swedenborg and St. Germain.

One afternoon in the latter part of the fifteenth century the monk Savonarola sat in his gloomy cell in the monastery of San Marco, grieving over the corruption of the world. He thought of the unspeakable moral crimes of Pope Alexandria VI and his son Caesar Borgia and shuddered. He thought of the "pagan heresies" which Lorenzo had introduced to Florence. He thought of the godless painters who tempted holy monks with their vivid portrayals of human flesh. Savonarola arose from his meditation and swore to rid Florence of these abominations. His fervidly ascetic genius soon gained him a large following, and when the French invaders departed from the city he attempted to turn the newly formed republic into a Christian commonwealth. But when Savonarola attacked the corruption of the Holy City, sparing not even the pope himself, he was cited as a heretic. Indignantly refusing the bribe of a cardinal's hat to change his style of preaching, he continued his denunciations, which led to his excommunication and execution at the stake in 1498. This was merely the prelude to another conflagration which was started by Torquemada, the pitiless Inquisitor-General and confessor to Queen Isabella of Spain. The Spanish bonfire was fed with the bodies of 10,000 Jews, with all the Hebrew Bibles that could be found, and with 6,000 volumes of Oriental literature. Thus, by the end of the fifteenth century, Italy and Spain were once more thoroughly "Christian."

While these events were taking place in Italy and Spain, another fire of revolt smouldered in Germany. Groups of Theosophists were now scattered throughout the country, studying and assisting one another in their common struggle for esoteric knowledge. Germany was destined to be the scene of a great moral struggle during the sixteenth century, and the opposing forces were assembling. On the side of freedom were numerous agents of the Theosophical Movement, some of whom must have worked with knowledge of the great Plan, while others served an ideal arising from an unknown source in their hearts.

In 1414 a young monk named Basil Valentinus was acting as the Prior of the Benedictine Monastery in Erfurt. According to

his own story, Basil determined to devote himself to the occult sciences at an early age. "I resolved to make wings for myself," he wrote, "so that I might ascend on high." His first flights into the ether must have been unsuccessful, as he relates that "my feathers were consumed and I fell headlong into the sea." But just at the moment when all hope had disappeared, "one hastened to my assistance who commanded the waters to be still; and instantly a *high mountain* appeared upon which I ascended, that I might examine whether there could be any friendship between inferiors and *Superiors,* and whether indeed these Superiors had produced Themselves upon earth." Now thoroughly convinced that Masters *did* exist, Basil determined that "whatever the ancient Masters had so many ages ago committed to writing and delivered to Their disciples was as true as truth itself." (*The Stone of Fire.*)

The first truth he discovered was that man's knowledge must commence within himself. "Only those who have obtained this passport can attain to the Magistery of Life; since they only can enter into the narrow gate [of initiation] as in the Mysteries we have just described." (*Chariot of Antimony.*)

The work of Basil Valentinus was continued by Trithemius, Abbot of the Benedictine Monastery of Spanheim, who was an Adept in the Secret Sciences and is said to have been initiated into the mysteries of the Kabala by a pupil of Pico della Mirandola. He taught the seven stages of evolution, mentioned several secret cycles and made some important prophecies. His definition of Magic was purely Theosophical:

> The art of Magic consists in the ability to perceive the essence of things in the light of Nature, and by using the soul-powers to produce things from the unseen Universe. In such operations the Microcosm and Macrocosm must be brought together and made to act harmoniously. (Written in 1506.)

His pupils inquired what he meant by Nature. "Nature," Trithemius replied, "is a Unity, creating and forming everything. Such processes take place according to *Law.* You will learn this Law if *you first learn to know yourselves.*"

The fame of Trithemius was perpetuated by his two distinguished pupils, Paracelsus and Cornelius Agrippa. Agrippa was a statesman and linguist, physician and chemist, philosopher, Kabalist and Neoplatonist. He passed through life alternately patronized and persecuted, courted by the nobility and hunted down as a heretic by the Church. Although knighted by Margaret, Regent of the Netherlands, and honored by the Queen of France, he spent

much of his life in dire poverty. Agrippa formed a secret association for the study of the occult sciences and wrote an esoteric interpretation of the New Testament. He taught the three-fold nature of the Universe, the identity of the Macrocosm and the Microcosm, and traced out the lines of correspondence between them. Space, he said, is threaded with invisible lines of magnetic force which unite men's principles with the occult forces of Nature. Hence—

> The human being possesses, from the fact of its being of the same essence as all creation, a wonderful power. Truth can be made ever present to the eye of the soul. Time and space vanish before the eagle eye of the immortal soul. Her power is boundless. (*De Occulto Philosophia.*)

All of these ideas, so contrary to the teachings of the Church, were gradually preparing the minds of the people for the coming battle. In the middle of the fifteenth century John Reuchlin appeared, the Imperial Councillor of Emperor Frederick III. In spite of his diplomatic duties, Reuchlin found time to study Neoplatonism, to perfect himself in several Oriental languages, and to write an interpretation of the Kabala in which he described the sevenfold constitution of the universe in detail. When he denounced the burning of the Hebrew Bibles he was expelled from Germany and his works were burned. But later, when Melancthon, Erasmus and Martin Luther came to him for instruction, Reuchlin lit the torch which set fire to the Christian world and became in fact the "Father of the Reformation."

The immediate cause of the Reformation was the revolt in Germany against the enforced sale of indulgences, which promised the shortening of the time spent in purgatory upon the payment of a certain sum to a priest. In the year 1517 Pope Leo X, desiring to rebuild St. Peter's Cathedral, ordered a special sale of indulgences in Germany in order to collect the needed money. When the Augustinian monk Martin Luther heard the news his soul rose in rebellion. "Why," he indignantly demanded, "if the Pope releases souls from purgatory for money, does he not do it for charity? Since the Pope is as rich as Croesus, why does he not rebuild St. Peter's with his own money, instead of extorting it from poor men?" Walking boldly to the Church of Wittenberg, Luther nailed his ninety-seven *Theses* to the door. The people gasped at his audacity. Some trembled with fear, others rallied to Luther's support. Erasmus of Rotterdam, then considered to be the most brilliant man in Europe, refused to take sides in the controversy.

Although he had already openly declared that "the monarchy of the Roman high priest was the pest of Christendom," he did not believe that a *direct* and aggressive attack upon the Church would accomplish the desired result. Erasmus had already voiced his own protest against the sale of indulgences, had already declared that there was no difference between Jesus' teachings and those of the pagan creeds, and had already tried to unite the world in a league of brotherhood. What, then, could this raw, uncouth monk hope to accomplish? Erasmus expressed his admiration of Luther's courage, but disapproved of his extreme methods of reform.

Luther raged when Erasmus' views were brought to him. Origen, Synesius, and Clement of Alexandria had all used moderation, and were simply excommunicated from the Church as a result. And the Albigenses, Waldenses and Knights Templar—they had used moderation and were burned at the stake. Luther felt that something more drastic than moderation was needed in this crisis. He wrote:

> We punish thieves with the gallows, bandits with the sword, heretics with fire. Why should not we, with far greater propriety, attack with every kind of weapon these very masters of perdition, the Cardinals and Popes?

The reply to this outburst was a papal bull condemning Martin Luther as a heretic. As soon as the paper arrived, Luther called all his friends together, made a bonfire outside the city walls and cast into it the document itself, a copy of the Church Canon and a volume of scholastic theology which he particularly disliked.

Up to that time the Church had not taken Martin Luther seriously. She thought of him only as a vulgar, quarrelsome monk who could be quickly silenced by the Inquisition. But one morning Pope Leo received a most disturbing communication from his German representative:

> These mad dogs are now well-equipped with *knowledge and power*. They boast that they are no longer ignorant brutes like their predecessors. Nine-tenths of the Germans are shouting "Luther!" and the other tenth goes as far at least as "Death to the Roman Curia!".

The pontiff was badly upset by this news. The matter was not as trivial as he had thought. This stupid monk must be given a lesson which he would not forget. The Edict of Worms was published, in which Luther was condemned as an outlaw and every one warned against giving him food or shelter. It also decreed that "no one shall dare to buy, sell, read or cause to be read any books of the aforesaid Martin Luther, since they are foul, noxious and written by a notorious and stiff-necked heretic."

As Luther neared Eisenach on his way home from Worms, he was kidnapped by his friends and taken to the Castle of Wartburg, where he spent his time making a German translation of the New Testament. During his retirement, his friends and students tore down the images of the Saints in the Churches and openly opposed the celebration of the Mass. Many celibate monks and nuns, remembering Luther's story of the 6,000 infant skulls which had been found under a convent in Rome, left their cloisters and went out into the world. When Luther married an ex-nun, they followed his example and started their household lives. Finally the whole of Germany was split up into two opposing factions, southern Germany remaining loyal to the Pope, northern Germany becoming Protestant. In 1555 the Peace of Augsburg was ratified, after which time every ruling Prince was given the opportunity to choose his own brand of Christianity.

It cannot be denied that the Reformation led to conflicts as bloody as the "Holy Wars" of the Catholic Church. Luther was extremely intolerant of anyone who disagreed with his own interpretation of the scripture; Calvin did not scruple to betray Servetus to the Inquisition, which burned him as a heretic. Even the mild Melancthon regarded the latter event with "gratitude." Why, then, should the Reformation be described as part of the Theosophical Movement?

Whatever may be said of Martin Luther, of his colleagues and successors in reform, the fact remains that these men were animated by the fervor of sincerity, by a hatred of corruption and a longing for freedom from the selfish rule and brazen hypocrisy of Rome. Whatever were Luther's faults, he *thought for himself,* elected his own beliefs. This was an example to the world. What he had done, other men could do—and did. Since his day religious thought has grown increasingly free, and in the present, no man need answer to an external authority for his beliefs unless he so choose.

"MENTAL CHANGES"

INDIVIDUALLY, each man may be said to be continuously engaged in "changing his mind"—more often than not, perhaps, unconsciously to himself. When the change is noted, the individual ordinarily ascribes his conversion to whatever may be the immediately preceding subject or object of his attention. As an exercise of reason this is so fallacious as to be absurd; is simply the familiar *post hoc, propter hoc*—"after this, therefore because of this." Nevertheless, anyone who chooses to observe will quickly become aware that this mode of reasoning prevails practically without exception. Not only the ordinary man, but the philosophers, the theologians, the scientists, the leaders in the world of affairs, even the very metaphysicians and logicians themselves have but to be examined in their most carefully considered argumentations for this fact to appear unmistakably. Each generation produces its own crop of these several classes of teachers and guides. Average mankind accepts without question their instruction and directions, never noting the ease with which its masters upset all the accepted doctrines of their forebears; never suspecting that its own authorities will be laughed at or commiserated by their successors two or three generations hence.

One who makes this discovery will have to do it for himself. Then, if he is not careful, he is all too apt to pass from the ranks of the believers in the great god Authority, and seek profit by setting up as an authority on his own account, since the fallacies of others are so deadly clear to him. One need not be a pretender or a hypocrite to fall into this greater fallacy. He needs only to have that confidence in his own infallibility which formerly he bestowed upon others. He has "changed his mind" only with regard to the object of his devotion. Here and there in every generation, however, will be found those who, having made the great discovery with respect to others, turn their attention upon their own mental content. Those who do this are certain to make a greater discovery still—that they, too, are victims of the fallacious employment of the mind. Such men can always be distinguished by the observer. Without going extensively into the characteristic marks of these rare individuals, it is sufficient to note that they cease to rely upon Authority, disclaim any authority on their own account; that they become students in the real sense, not only "willing to learn" but determined to do so; that their course is at once that of

humility and assurance. Who but can name some great men in every country and of every race? Who can doubt that they experienced a "change of mind" of an altogether different character and quality from what is generally associated with the phrase?

The reader who cares to dwell for a few moments of reflection on what has just been written, may very well be led by this reaction of mind to inquire, What is the use of such a discovery to a man if he does not capitalize it to his own advantage? Those who experience this inner response without examining into its genealogy will merely pass from the fallacy of belief to that of authority. Their conclusion, their "change of mind," will be of the familiar kind. But again, some may be moved to ask, What is the source of the devotion which inspires and sustains the man who makes the second and greater discovery? The answer can only be that in the case indicated, the individual experienced a "change of heart" as well as a change of mind. More anyone chooses to meditate on this proposition, the more will he become clairvoyant in the true sense—that of Self-Knowledge. He will be able to see by the light within himself—and this is the third and greatest discovery of all.

It is but a truism to recite that no one is intentionally mistaken, that everyone naturally strives for correct judgment, that every time anyone has occasion to "change his mind" he does so because he has a "good reason." But who reflects that originally he had what he then regarded as a good reason for the judgment he now sees to have been erroneous? That, judging by all past experience, he will sooner or later discard the present judgment, also for a "good reason"? Yet manifestly he is using the same power to reason throughout the whole succession of his changes of mind. If asked, however, who will not at once reply in every case that his change of mind was due to this or that "condition," external or internal? Only a modicum of reflection is required to perceive that in practically no instance does it occur to the man that he very literally does not know how to think accurately, that is, to make proper use of his reasoning power. Unless a man does see this for himself, he will make no effort to "change his mind" in respect to his employment of one of the greatest of the psychological powers. At most, he will merely pass from one scene of misuse to another, and if from a lesser to a larger field, create the more confusion and distress for himself as well as for others. And unless a man reflects as well as "reasons," he will never practically and effectively learn that besides the "conditions" on which human reasoning is generally based, conditions which he habitually takes as "facts," another

factor than any and all conditions which engage the reason has to be well regarded. This: his assumptions or "premises." If "the truth, the whole truth, and nothing but the truth" were in a man's possession, he would have neither need nor occupation for reason or assumptions. He would know. Where one knows, assumption is impossible, and the only use of pure reason is to employ in conduct what is known.

One has but to look about him in the present or to survey the record of history. The theologian of this or that religion or sect knows certain psychological facts; he "changes his mind" in order to make it "fit the facts," but to achieve this he has to make corresponding assumptions—assumptions which do *not* "fit the facts" as other men have encountered them in their experiences. Apply the same power of observation in the various fields of science—and one cannot fail to see that so-called "exact" science is in the same case as so-called "revealed" religion. Turn the gaze into the arena of business, of politics, of sociology, of theories to account for "depression" and to produce "prosperity," of the assumptions whether of the "pacifist" or of the proponents of "preparedness" or of conqueror and conquered. In each of these varied scenes of human experience the facts are common to all the thinkers and reasoners, but the respective assumptions are poles apart. Is it enough to say that they reason "differently," that they are "sincere," that "it has always been thus-and-so and therefore must continue in like manner"?

Whether "for" or "against" no matter what assumption, does it not become apparent on reflection that the more convinced the man is, the more he is incapable of correct use of the reasoning power? That the more he is sure he "knows his own mind," the more he exhibits his appalling ignorance and misconception of true Psychology. Where can such a man be found who will "listen to reason"—as reason has been employed by a brother man with the same "facts" before both? All history past, all history in the making at every instant, show that the more two such men discuss the common facts, employ the common power, the farther they find themselves apart, the more they "argue" the more the "arguments" of each recoil upon himself, till in the end they become, not men with a fraternal object to achieve by mutual consideration, but enemies, each bent on the employment of force against the other. After the havoc is wrought and each "returns to his senses," both perceive their common insanity, their lack and loss of "reason"—only to repeat the cycle, unless meantime they

learn "by dear experience" the dual nature of the human mind; unless by reflection they perceive the influence of "assumptions" on conduct. Even so, where are they to turn for knowledge of the psychic nature and its laws—knowledge in the same sense as that of physical nature?

To be willing to learn means to have seen for oneself that most "assumptions" are, in less euphemistic but more accurate designation, mere preconceptions, and these in turn the progeny and heirs of one or another "conditioned reflex" of human nature to stimuli which otherwise great thinkers are no more immune to than an animal until they have a change of heart as well as of mind. If one wants an illustration, let him consider the case of Pavlov whose experiments with the involuntary actions of dogs gave us the now classic phrase, "conditioned reflex." What kind of unknown stimulus was Pavlov himself subject to which made him the slave of his method of experiment? What kind of "conditioned reflex" are the present-day Behaviorists and other would-be psychologists victims of, who respond to the stimulus of Pavlov's example? Are they any wiser in Self-Knowledge than Pavlov's dogs? What are their "assumptions" but psychological counterparts of the bells to which the dogs came in time to give a "conditioned reflex"?

TWO SOULS OF MAN

Thou also affirmest "that very many of the Egyptians *attribute to the motion of the stars whatever may happen to us.*" But what that fact is must be explained to thee by many of the Hermetic concepts.

For man, as these writings affirm, has two souls. The one is from the First Intelligence and is participant of the power of the Creator, but the other is given from the revolutions of the worlds of the sky, to which the God-beholding soul returns.

These things being conditioned after this manner the soul that comes into us from the worlds follows (and is affected by) the periodic circuits of those worlds. But the soul that is in its higher mental quality from the world of Intelligence, is superior to the movement of the world of generated existence and through this there takes place both the unbinding of fate, and the upward progress to the gods of the World of Mind. The theurgic discipline (or initiation), so far as it conducts upward to the Unbegotten, is made complete by a life of this kind.

—IAMBLICHUS *to* PORPHYRY.

THE THEOLOGY OF SCIENCE

The business of the man of exact Science is to observe, each in his chosen department, the phenomena of nature; to record, tabulate, compare and classify the facts, down to the smallest minutiæ which *are presented to the observation of the senses with the help of all the exquisite mechanism that modern invention supplies, not by the aid of metaphysical flights of fancy.* All that he has a legitimate right to do, is to correct by the assistance of physical instruments the defects or illusions of his own coarser vision, auditory powers, and other senses. He has no right to trespass on the grounds of metaphysics and psychology. His duty is to verify and to rectify all the facts that *fall under his direct* observation; to profit by the experiences and mistakes of the Past in endeavoring to trace the working of a certain concatenation of cause and effects, which, but only by its constant and unvarying repetition, may be called A LAW. This it is which a man of science is expected to do, if he would become a teacher of men and remain true to his original programme of natural or physical sciences. Any sideway path from this royal road becomes *speculation.*

Instead of keeping to this, what does many a so-called man of science do in these days? He rushes into the domains of pure metaphysics, while deriding it. He delights in rash conclusions and calls it "a *deductive* law from the *inductive* law" of a theory based upon and drawn out of the depths of his own consciousness: that consciousness being perverted by, and honeycombed with, one-sided materialism. He attempts to explain the "origin" of things, which are yet embosomed only in his own conceptions. He attacks spiritual beliefs and religious traditions millenniums old, and denounces everything, save his own hobbies, as superstition. He suggests theories of the Universe, a Cosmogony developed by blind, mechanical forces of nature alone, far more *miraculous and impossible* than even one based upon the assumption of *fiat lux* out of *nihil*—and tries to astonish the world by such a wild theory; which, being known to emanate from a scientific brain, is taken on *blind faith* as very scientific and the outcome of SCIENCE." (*The Secret Doctrine* II, 663-4.)

NO investigator animated by the true spirit of science can take issue with any of these statements. As a matter of fact, modern observers who have studied the practical effects of the misuse of scientific method and discovery have come to exactly the same conclusions. If current scientific literature may be taken

as evidence, orthodox scientific thought is due for a "reformation" fully as significant as that wrought by Martin Luther and Erasmus. And as was the case in religion, the reformers are gathering from within the ranks of science itself.

Dr. A. S. Pearse, professor of zoology at Duke University, is one who arises in defense of science. For this reason his remarks have greater value than the accusations and condemnations with which he attempts to deal. He says:

> Perhaps the clearest discussion of the relations between science and metaphysics has been presented by Bergson. He points out clearly that science can never do anything but weigh and measure. All a scientist can ever hope to do is answer such questions as how long?, how fast?, how wide? and how much? In addition to knowledge gained by weighing and measuring man may know other things, and these Bergson groups under intuitive knowledge. The crux of the matter is, are there things that can not be weighed and measured? Bergson, most theologues and many scientists believe that there are.
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> Theoretically science can do no harm. Its sole purpose is to learn the truth about natural phenomena, and truth should hurt no one. Unfortunately scientists are human. They are sometimes just as bigoted and partisan as other men. Some scientists are capable of concealing truth or of telling half truths to help their cause. Some have used discoveries to injure their fellows. But there is nothing inherent in science, its methods or its teachings that should make men wicked. If a man has the scientific spirit, he is brave in the defense of truth, but humble before the mysteries of nature. A scientist will always respect evidence more than authority. . . .
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> Science has not changed the nature of men or of their societies. It has given opportunities, and men have chosen to use these to make themselves better or worse. The false assumption on the part of critics is that a scientific discovery should mean progress for society. The radio gives man unusual ability to communicate over great distances. It may be used to give notice of storms and to keep ships on their courses through dense fogs, and thus benefit man; but it is also used to send out misinformation (Zion City informs listeners that the earth is flat) or to spread selfish propaganda. It is not the business of science to make men good.[1]

Definitions of the scope of science, however, seem to have been incapable of preventing the dissemination of mere speculative theory in the guise of established fact. It is now frankly admitted

[1] "For Science," *The Scientific Monthly,* October, 1937.

that the scientific cosmogony—in which the universe is "developed by blind, mechanical forces of nature alone" was only an imaginative vagary on the part of nineteenth century scientists. This is made clear by Bertrand Russell in his Introduction to Lange's *History of Materialism:*

> Historically, we may regard materialism as a system of dogma set up to combat orthodox dogma. As a rule, the materialistic dogma has not been set up by men who loved dogma, but by men who felt that nothing less definite would enable them to fight the dogmas they disliked. They were in the position of men who raise armies to enforce peace. Accordingly we find that, as ancient orthodoxies disintegrate, materialism more and more gives way to scepticism. At the present day, the chief protagonists of materialism are certain men of science in America and certain politicians in Russia, because it is in those two countries that traditional theology is still powerful.

While we may recognize and be thankful for the service of science in liberating the west from theological ignorance, the debt so incurred need not be repaid by willing submission to scientific "revelation." Very few scientists realize or give thought to the fact that the blind faith in dogma through which the church held the race mind in thrall is not a characteristic or product of religion *per se,* but is a fundamental tendency in human nature and equally susceptible to scientific fiat. There are, however, one or two men of science now making tentative explorations of this possibility. Dr. Francis B. Sumner, professor of biology at the University of California, expresses his fears of "The New Dogmatism"[2] which has resulted from the specialization of scientific research. In his view, not merely the "man in the street," but scientists themselves are victims of this tendency. He points out that "not only do we depend more and more upon authority for our scientific information, but this information, when it reaches us, arrives in the form of abstractions to a large degree divested of living reality." Dr. Sumner examines the correspondence between scientific and religious dogma:

> A worshipper, repeating the "Apostles' Creed," expresses his belief in the "resurrection of the body." A student, reciting in a chemistry class, tells the professor that the "atomic number" of sodium is 11. I do not wish to make too much of this comparison. All I contend for is the probability that to many students "atomic number" is just as much of a dogma as "resurrection of the body," and just as little capable of being translated into terms of human experience. As to the professor—

[2] *The Scientific Monthly,* October, 1937.

> well, there are professors and professors of course. But any kind of an instructor in chemistry will tell the student in a few words just what the expression atomic number "means." The number of positive charges on the nucleus of the atom—what could be simpler? And so, I doubt not, could any bright Sunday-school teacher give a verbal account of the resurrection of the body.

His chief criticisms are directed against the speculative flights of modern mathematical physics. As a biologist whose field of investigation is plainly objective, he finds the new explanations of the universe "a bog of paradoxes and *non-sequiturs*."

> In general, the illustrative "experiments" by which the principles of relativity are justified to the reader are purely imaginary ones, involving such things as the observer's moving through space at the velocity of light or moving at an accelerated motion, corresponding to the acceleration of gravity, or involving his ability to read another man's clock or measuring rod, while one or both of the parties are traveling at these furious speeds. . . . A disembodied equation may be highly interesting and valuable when we are concerned with pure mathematics, but it hardly serves as a substitute for a description when we are concerned with phenomena in the physical world. At least this is true for the non-mathematical mind. To an unsophisticated naturalist I fear that this argument that a thing may have the properties of a wave and a particle at the same time is too strongly reminiscent of some of the old-time theological arguments for the doctrine of the "Trinity."

Dr. Sumner feels that the "new physics" has received a far too romantic presentation to the public. Where is the *scientific* justification for all this glamor?

> There would seem to be a vast inconsistency between the traditional notion of the man of science, with his uncompromising insistence on evidence and his lofty scorn of guesses and unproved assumptions, and the quasi-mystic who tells us all these strange things about space and time and infinity and who describes with such assurance the detailed intricacies of an infinitesimal world forever beyond the range of human observation.

He finds in the press accounts of progress in physical science "too much parade of individual brilliancy and resort to whimsical analogies and startling paradoxes, and too little earnest attempt to make the reader really understand the matters on hand." He concludes:

> What some of us would like to find is first of all a clear description of what the experimenter really does and sees, and

> *after that* an account of his theoretical interpretations. We are too apt to read about "bombarding the atom," "smashing the nucleus," "weighing the electron" and the like, with commonly but the faintest intimation of how all this is done and why these effects are inferred. As Swann pointedly remarks: "We say that we set up apparatus and measure the number of electrons going through a certain hole. We do no such thing. We make settings of certain electrical instruments, and we make readings of others. From our readings and settings we *calculate* these visions of electrons going through holes, and the like." It is unfortunate that this realistic view-point is not more constantly kept in mind by the popular expositor of recent scientific developments, biological as well as physical.

As H. P. Blavatsky indicated years ago, if the scientist is to discuss the attributes of atoms, or their constituent particles in accordance with his method, "he must first know what the atom is, in reality, *and that he cannot know,*" for—

> He must bring it under the observation *of at least one of* his physical senses—and that *he cannot do:* for the simple reason that no one else has ever *seen, smelt, heard, touched* or *tasted* an "atom." The atom belongs wholly to the domain of metaphysics. It is an *entified abstraction*—at any rate for physical Science—and has nought to do with physics, strictly speaking, as it can never be brought to the test of retort or balance. (*S. D.* I, 513.)

In *The Atlantic Monthly* for July, 1937, Prof. Herbert Dingle, an English scientist,[3] records the same troubled concern as Dr. Sumner, but with the broader ground of a review of the several major departments of modern intellectual endeavor. Writing under the title, "Knowledge Without Understanding," he introduces his illustrations with the remark: "If there is one word that more aptly than another describes modern intellectual activity in its widest generality, that word is 'unintelligibility'."

Prof. Dingle looks at logic, literature, art, music, religion and modern physics. In each of these fields he shows "unintelligibility" the achievement when not the ideal. He comments:

> Now it is of the first importance to notice that in all these departments of thought we are dealing, not with difficulties which stimulate, but with impossibilities which crush. The new ideas are not merely hard to understand; they are intrinsically beyond the reach of understanding—or, at the best, beyond the reach of understanding without a long and arduous course of special training which only a few can undertake.

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[3]Assistant professor of astrophysics at the Imperial College of Science and Technology, London.

> Furthermore, the doctrines which are preached by the favored few who have more than normal powers are not such as, to the ordinary man, seem reasonable. If they were, he might profitably take the reasoning on trust, and try to think out the full effect of the conclusions on his public and private life. But when the conclusions themselves seem absurd, and he is incapable of checking them, what then? When the witnesses speak in unknown tongues and the judge seems mad, what is the poor jury to do?

A scientist himself, Prof. Dingle naturally feels that "science offers the most promising inroad into the fundamental philosophy of life to which all intellectual interests must lead if they are followed to their source." On this account he is particularly alarmed at the growing unintelligibility of the new physics. The average man, already deeply awed by the objective achievements of physical science, is dazzled by the pyrotechnics of mathematical speculation. Even thoughtful men trust humbly in the modern theoretical explanation of things. Prof. Dingle notes the unconscious pathos in their surrender to the "better" (*i.e.*, the "mathematical") minds.

Where does this "surrender" lead? Prof. Dingle answers:

> The enigmas of modern physics are in no measure explained; they are simply dispelled. The reader is not enlightened; he is drugged. Paradox, instead of being a challenge to thought, becomes a delight to the ear, and whenever the reader feels a question arising in his mind there is always a comfortable assurance ready to preserve him from the dangers of thinking out the answer.
>
> "But what," he may ask, "is this electron which you say is both a particle and a wave?" "Ah, you needn't trouble about that," is the reply; "we don't know ourselves: the electron is something unknown doing we don't know what." "But what, then, have you discovered? Why do you speak so contemptuously of the old science, which we understood in some measure, and say it is superseded by a great new revelation?" "Because we have found that, at bottom, everything is mathematics." "What, then, is mathematics?" "Why, my dear fellow, mathematics is the one sole characteristic of the Creator: would you presume to understand that? If you knew mathematics you would know everything; a mathematical formula, and nothing else, expresses the ultimate reality. You yourself are simply a mathematical formula—a mathematical thought in the mind of a perfect Mathematician. Is not that sufficient justification for contempt of a mere system of screws and flywheels which the last century talked about?" "Well, yes, I

> suppose; but I don't see how you have found out that everything is mathematics." "Why, by mathematics, of course; how else, since mathematics is everything? The system of physics is a closed system."

Prof. Dingle quotes several modern writers who recommend such intellectual serfdom. One of them says that "science leaves us free to give such interpretations of the mysterious background of phenomena as we may wish." Thus—

> Captivity looks not so bad, then: we can really trust our masters to look after us. And here finally is the proof, from one safely imprisoned. It is far better even than we dared to hope. We are not merely lodged in comfort; we are hypnotized so that we believe we are free.

An illustration is Sir Arthur Eddington's *The Nature of the Physical World*. The reader pays his money for the book and is thereby emancipated from "the shackles of classical science." "In other words," says Prof. Dingle, "to think is to be shackled; freedom is to pay others to think for you."

But what is the ordinary man to do? What *should* be the contribution of scientific writers?

> He can think for himself if Sir Arthur will tell him, not what it is impossible to do and know, or what science no longer believes, but in what scientific thought can assist his own thinking. It is just this lack of a medium for the ordinary man, between an impossible effort and no effort at all, between the fate of Sisyphus and the ministrations of Procrustes, that makes it so important to-day to examine the essential character of science itself rather than the particular aspect which it presents at the moment.

One may be ignorant of Prof. Dingle's capacities as an astrophysicist, but this article leaves no doubt that he is a psychologist of parts. Turning from illustrations of child-like faith in scientific speculation, he asks what may be the effect of such a state of mind on democratic society. As he says, "the question is not pleasant." In answer, we are provided with a "psychoanalysis" of the "ordinary man":

> In matters which he has once learned to call "science" his respect for knowledge is abject; the most obvious nonsense is welcomed with joy and wonder if it is only called "mathematics" or "quantum theory." On the other hand, in matters of infinitely more difficulty which are not technically "science," the opinions of experts with first-hand knowledge are deemed absurd, or even criminal, if they conflict with the emanations of his own ignorance.

Then, the prognosis, equally cogent:

> The blind acceptance of authority, as well as the supreme assurance of ignorance, must yield to the active operation of a reason conscious equally of its sovereign powers and of their proper limitations. There is no state of mind more easily exploited by the clever demagogue, charlatan though he may be, than that which exists among us at this moment.

Now comes the important question: What is to be done? Admitting that "a nation of men and women with free, disciplined minds is a dream," Prof. Dingle urges that it is a dream worth realizing; but, as he points out, it requires individuals who will strive to keep themselves detached from the partial viewpoints of the specialist and thereby preserve their perspective in viewing the content of the whole field of inquiry. He concludes by saying that all he has attempted to do is to direct attention to the problems raised, ending with the words: "We stand in a perilous position; to realize the peril is the first necessity."

Fifty years ago, with the publication of *The Secret Doctrine,* in the lines quoted at the beginning of this article, and elsewhere, H. P. Blavatsky made precise definition of the peril discerned by Dr. Sumner and Prof. Dingle. While in the light of her warning their expressions seem as faint echoes, they may indicate the dawn of a new view of physical science. Scientists, by virtue of the *practical* character of their activities, should be of all men the most self-reliant. They traditionally dislike "authority" of any kind and abhor instinctively the worship of "unintelligibility." We may look forward to similar expressions from other dissenters in the scientific ranks, and to a new spirit of questioning. There may even be demand for a precise accounting of the *facts* in fields other than physics. If the latter science is, as one writer has put it, "firmly grounded on the principle of uncertainty," it may yet be discovered that current theories of anthropogenesis have still less warrant for being taken for granted as "proved."

Theosophists should seize every opportunity to acquaint the general public with the unsettled character of scientific doctrines and explanations of things, toward the end that men may realize that no more than the Christian dogma, does modern science provide the final solution to human problems. From the intellectual point of view, the study and the acceptance of Theosophical philosophy has one essential requirement: reliance on one's own powers of thought and discrimination.

"SAMVRITI"

> As we rise in the scale of development we perceive that during the stages through which we have passed we mistook shadows for realities, and the upward passage of the Ego is a series of progressive awakenings, each advance bringing with it the idea that now, at last, we have reached "reality"; but only when we shall have reached the absolute Consciousness, and blended our own with it, shall we be free from the delusions produced by Maya. (*The Secret Doctrine,* I, 40.)
>
> That Ego, progressing in an arc of ascending subjectivity, must exhaust the experience of every plane. (I, 330.)

FROM the viewpoint of the evolving ego, life consists of passing from one level of relative reality to another, as the experiences of each are progressively exhausted. Similarly a race, as a collection of egos, moves forward in the same fashion, its common idea of reality being determined by the average intelligence of the beings which go to make it up.

Of necessity, therefore, one who begins the pursuit of truth in this life starts out with the measure of reality and technique of approach afforded by his civilization. Usually the search begins with an attempt to find out the causes of things, to see the springs of action in nature and in man and to understand them. There is born, or "reborn," a love of the quest, a hunger *to know,* and with the enthusiasm found in worthy occupation the business of fact-finding starts in earnest. One by one Nature yields up her secrets: her wonderful processes become familiar, the vast analogy of her functions grows into a coherent unity. The Seeker explores the objective world in every direction, finds everywhere the rule of law "inherent in the whole." Mayhap even a satiety of knowledge is reached. It gives him pause.

Consider the book, *The Secret Doctrine.* Consider the knowledge of natural law concentrated therein: the history of Man, of the Universe; the laws governing their evolution and their destiny! An active mind, if fortunate enough to be free from the prejudiced opinions graced by the name of modern learning, can by a careful study of this book gain a knowledge of things in general and often in particular far superior to that of any of the world's leading students or all of them together. And this at the relatively small price of some hard mental effort. As a matter of fact, students who make *The Secret Doctrine* their "text" for only a few years cannot

help but acquire a high degree of perspective as to all the phenomena of life which the world of science finds so confusing.

Arrived at this eminence of understanding, the Seeker looks beyond. Scanning the metaphysical horizon he perceives other and loftier heights of knowledge. There is, for example, much about the lighting up of Manas that he does not know. Indeed, there is no end to all this knowledge!

Truth lies all about, for the asking. Scientists have grown bent and gray in the laboratory, patiently and laboriously wresting from nature one little fact which, if only had they known, or would listen, we could have told them long ago. Theosophists are as rich as Croesus in truth of this kind—it is a commodity of which they have an inexhaustible store.

The Seeker wonders to what end all this truth will lead. He ponders. There comes finally a dawning perception of the infinitude of truth as he has known it. It has hands and feet in all directions; eyes, heads, mouths, and ears in every direction. And yet, he has an innate feeling that there is something lacking in all this fulness, an all-important factor omitted from his calculations. *It is himself.*

There grows the realization that knowledge, the learning which he and others have acquired, is the same for all men. But that each man brings to knowledge the coefficient of himself—his own relation to it—a new relation in all this complex of relations, a great Unknown to end all others!

Musing thus, the Seeker perceives the vast modifying power of this factor, an "absolute" in its bearing upon the intrinsic worth of human intellection. If, among the darkened minds of the Middle Ages, when there was almost complete lack of what we now hold as knowledge, Buddha could have lived, He still would have been Buddha. His wisdom would have shone forth undimmed. Let Buddha today step before a convention of the world's most serious and well-intentioned men—men considering with all their might of understanding the woes of human kind: the same light would shine forth; the universal syllables of Buddhic light will brook no casual form. He knows the answers to all questions of every age; yet, *does here lie Buddha's wisdom?* The wisdom of a Buddha has naught to do with knowledge, yet all knowledge all the Buddhas have.

So, the Seeker finds, there is Truth and TRUTH; there is the lesser and the greater knowledge. The latter contains all the fundamental elements of the former, yet the converse is not true.

The observer who from a moving vehicle measures the movements of other bodies while ignorant that his own position is a changing value, fails to correct his observations for his own motion and cannot therefore ever measure rightly. Realizing this, the Seeker essays the long task of computing his own position on the wheel of change. Looking inward he finds an alarming eccentricity from the motionless center of life. Assuredly, he *knows* nothing, but that his "knowledge" is but a series of illusions cast on the magic screen of time by a projector which is itself a prism of erratic planes and angles.

Follows an adjustment of internal relations to external relations. From the world of Facts the Seeker has passed into the world of Attitudes. A fleeting glimpse is obtained of that eternal central position at the heart of all; only a glimpse, yet enough that the memory of that moment is a ceaseless spur to the tiring mind, the dully responding perceptive powers. But there can be no discharge. The Soul has taken up the guerdon; the Warrior has entered the lists. The Seeker knows he does not fight alone.

But what of all the facts—the knowledge of the relationships of forms as comprehended by the world? What, O Arjuna, hast thou to do with so much knowledge as this?

Well might we ask, What did H. P. B. do with it? She used it to meet the Race where she found it. Where is that? At intellectual and moral grips with the conflict of science and theology; in the throes of exhausting the experience of the plane where such conflict is possible, if not inevitable. To the world she brought a master key for this, its problem. It is even thus, by taking her key and *using* it, that the Seeker comes to the place where he is—where he can understand that other key brought by H. P. B. to her disciples, a key implicit in all her writings:

> And having learnt thine own Ajnyana, flee from the Hall of Learning. This Hall is dangerous in its perfidious beauty, is needed but for thy probation. Beware, Lanoo, lest dazzled by illusive radiance thy Soul should linger and be caught in its deceptive light.

What is truth? Truth is vision of the Self-dependent reality of whatever its object may be, expressed in the terms of the eternal divine proportions relating to the cycle in which the object is considered. Truth is That; Truth is the Law governing the manifesting aspect of That; Truth is the transcendental paradox which describes the relation of the forms *of* That to That which is out of all relation, on their journey back to the Sacred Seat.

YOUTH-COMPANIONS' FORUM

ARE *Consciousness and Intelligence the same thing?*

Each of us who reads these words is the Perceiver, the Immortal Thinker, the One Consciousness Itself. This morning we were engaged in definite and to us important activity; so, also, a year ago other events and problems crowded the stage of life with as great importance. That we have evaluated and can remember these things shows us that we ourselves were not at any time wholly involved in the events in which we took part, in the problems which seemed important, but that always we were standing aside and looking at them. That persisting *something,* which has been the witness and perceiver of all changes, must have remained unaltered throughout. Otherwise we could have no memory of events; as each event passed we would have been merged into it and have become it. Only Consciousness, Itself changeless, can see and experience changes.

However, while we know that our identity is the same, that we are the selfsame individual, the same "I am I," we feel that something has changed during the passing years. Through observation and experience we have learned many things. We, like the bee, have collected the nectar from life as it passed and stored it in our higher being. Like the point within the circle, we have changed not, but our circle of knowledge and experience has expanded. We are looking into a larger field, seeing with a better instrument. Consciousness is the power to see and know, Intelligence is the seeing and knowing.

Intelligence represents the accumulation of perceptions and experiences by means of which the unity of the One Consciousness is realized. The degree of Consciousness which manifests in forms is dependent upon the intelligence acquired by the center of Consciousness using any particular form.

We know of three degrees of consciousness. In the lower kingdoms there is simply "consciousness." In the human kingdom, as we know it, *self*-consciousness exists. But the self-consciousness which distinguishes us from the animals, the knowledge that "I am I," is not to be compared with the universal consciousness of the real Ego. H. P. B. says, "The universal consciousness of the real Ego transcends a million-fold the self-consciousness of the personal or false Ego."

If we have been through every possible experience in the past and have had every opportunity that the Great Ones have had, then why do we differ from Them? We are in essence the same unconditioned Consciousness as They, but our Intelligence or acquired experience has not been co-ordinated with our present plane of action. The universal consciousness of the real Ego is Theirs at all times. Our task is to learn how to bring that knowledge of universals through to our brain-mind for every-day use.

The evidence for the idea of Universal Law is all in terms of our sense-perceptions of Nature. If our senses are unreliable as sources of knowledge, how can we say that we know this is a universe of Law?

The statement of the universality of Law is an axiom, a self-evident fact in nature, a fundamental requiring no proof. Itself "unprovable," other truths may be known through It. Upon It may be reared applications which are subject to proof because they are secondary.

But "evidence in terms of our sense-perceptions of nature" is secondary. It is not proof of *universal Law.* After this great axiom has been stated then there may follow illustrations of how this fundamental may be applied, but *it* can not be "proved." A teacher of Arithmetic tells the children that one and one is two, but he makes no effort to prove it. The child sees it or he does not. Of itself, an axiom reaches directly to the inner nature. But then the teacher goes on to give problems, to illustrate the application of the axiom stated. The sense perceptions of nature are not a source of knowledge, but they do give us some of our material for applying the axiom that this is a universe of law.

The animal feels or "senses" the changes in temperature, the changes from light to dark, heat to cold, but he does not carry these experiences to the plane of mind. He does not apply any principle to these experiences. The statement of an axiom means nothing to an animal, but it can arouse the inner perception of a man. Why, then, does not all humanity know that this is a universe of Law? For the same reason that a child who has never been taught Arithmetic can not multiply. He must be taught. We always need to hear the axioms stated. *No child can learn the multiplication table from nature.* Humanity cannot know that this is a universe of law until and unless it hears the axiom stated. Men know that effect follows cause, but that this is a *universal* fact can not be realized by humanity without the help of Those who know.

For centuries humanity has been following teachings about Law which are not axioms. It has accepted partial and secondary truths and the ancient axiom that Law is universal has been lost, has been covered up. For centuries man has watched the sun "rise" in the east and "set" in the west, has seen the tides roll in, and he has known that unsupported objects fall. But he has accepted wrong or partial interpretations of these things. He has believed false teachings about an extra-cosmic power which, he was told, regulates the activities of sun and tides and man.

H. P. B. broke the spell of this false conception by restating the axiom that Law is universal. She gave man this fundamental principle from the basis of which he may understand correctly, not only his sense perceptions, but all other experiences, and *know for himself* that this is a universe of Law. H. P. B. says of the fundamentals that once a man "has gained a clear comprehension of them and realized the light which they throw on every problem of life, they will need no further justification in his eyes, because their truth will be to him as evident as the sun in heaven."

What is the Universal Over-Soul? If it is not the same as the Absolute, why is it said that all souls are identical with the Absolute?

(*a*) The Universal Over-Soul is the universal *Sixth* principle. It corresponds to Man's Sixth principle, called in Sanskrit, *Buddhi.* Buddhi is the vehicle of the True man—who is one with the All. On a universal scale the same is true: the Universal Over-Soul is the vehicle for the Real—the Unknowable Reality taught by the First Fundamental.

Periodically, manifestation takes place within the Absolute, yet It is not affected. "I establish this whole Universe with a single portion of myself, and remain separate," says Krishna. Manifestation is eternal, as is the Absolute, but is characterized by change, while the Root of all is changeless. The Universal Over-Soul, as the collective intelligence of all the beings in evolution, changes in the sense of growth through their evolution.

Change characterizes matter, but there is a certain unity on all planes of being. On the physical plane we share "matter," and during our stay on this earth we use many times all the matter on the earth. Similarly, we share thoughts and feelings and ideas. On Spiritual planes the sharing is even greater, and we no longer feel a sense of separateness, for the lower planes are but shadows of the Spiritual planes where Brotherhood is a fact, not just an ideal.

The Universal Over-Soul is the collectivity of all souls; in this sense all souls are identical with It and "sparks" of It. We are our

enemies and our friends. We are heat and cold and day and night. There is no separateness at all. This must be so, or we would not see the differences in each other and *think* that we are separate, for we cannot observe separateness unless we contrast it with unity. Each one of us contains that unity within—an identity with the Universal Over-Soul and One-ness with the great Source of All.

(*b*) The word Soul is a generic term, used in many ways. But in stating the Third Fundamental, H. P. B. says that the Over-Soul is an *aspect* of the Absolute, and she speaks of it as the Universal Sixth Principle. Our only hope of comprehending what this means is by analogy.

The Higher Self in Man is identical with the Absolute, and the real man is defined in *The Ocean of Theosophy* as the perfected triad, *Atma-Buddhi-Manas*. If Atma is the Higher Self, then Buddhi-Manas must correspond to the Over-Soul, that part which has become so idealized, so close to the Real, that it does not change from period to period but is carried from incarnation to incarnation, from planet to planet. It is not dispersed when the lower principles go to pieces but is the basis for the next incarnation of man, or of the solar system. Like a plan, or prototype, the Buddhic principle includes the perfected ideas upon which we work to produce the next life of man or planet.

H. P. B. writes in the *Glossary* that to say every human soul is born from the "Soul of the World" means that our Higher Egos are identical with It. The Higher Ego here might be Buddhi-Manas, the reincarnating part of man. We know that our human soul or lower mind is a ray from the higher mind. Then the "Soul of the World" is a name for the combined Buddhi-Manas of all Egos and from It are born human souls and all lower souls. It carries the seeds of all the past.

Universal Law

An apprehension of the universality of law in nature, of her unity, does not require special technical terms for the objects or their attributes, but plain and accurate observation and accurate naming of these things in accordance with the character of language and of the thing named. —Friedrich Froebel.

"REINCARNATION" OF SHANTI DEVI

PRESS dispatches of January 18, 1936, gave first publicity to the strange case of Shanti Devi, a Hindu girl of Delhi, India, whose claim to the memory of a former birth was apparently genuine. The substance of the news report was given in THEOSOPHY for May of that year, and the question was asked, "Who, among the countless millions who read this press item, will follow it up?"

The American Weekly of December 12, 1937, devotes more than two of its large pages to the report of an investigation of the claims of Shanti Devi as made by three Hindus of character and reputation. The publication named is the Sunday Magazine section of the various Hearst newspapers, and has a circulation of more than five million copies. Probably one adult American out of every four or five thus had the matter brought to his attention in a form acceptable to him. Theosophists will doubtless often be asked in public and in private for their views on the case of Shanti Devi. It will be their opportunity to direct the interest of inquirers to an impersonal and philosophical consideration of the principles, laws, and factors involved, as taught in Theosophy, which purports to afford a rational explanation of all the phenomena of manifested existence. Mme. Blavatsky's *Key To Theosophy,* Mr. Judge's *Ocean Of Theosophy,* Robert Crosbie's *Friendly Philosopher,* will give safe, sane, thought-provoking and enlightening information to anyone at all interested. Even the most intelligent and educated theosophists, not simply the lesser versed, would do well to remind themselves that it is the part of wisdom as well as of fidelity to refer inquirers to the source whence they have derived their own information and instruction. The advantage to mankind and to the future of the Theosophical Movement from such a procedure would be inestimable and far more than offset the undesirable resultants of the world-wide notoriety into which Shanti Devi and the two families directly involved have been thrust.

It is as true today as when H. P. Blavatsky made the statement fifty years ago, that even believers in Karma and Reincarnation only "dimly perceive that the whole secret of Life is in the unbroken series of its manifestations: whether in, or apart from, the physical body." The statement is one that calls for the deepest reflection, for certainly the prevalence in the present as in the past of the most diverse and contradictory views of Karma and Reincarnation should

show anyone how largely those views are dogmatic or speculative. In all too many cases they are as far from rational as the dogmas and creeds of sectarian religion, or the theories and fancies of present-day psychology and metaphysics. A possible hopeful consequence of the case of Shanti Devi might very well be a searching reconsideration by Theosophists themselves of their own understanding, as well as a more impartial and less personal investigation of the nature and laws of the psychical elements in man by the scientific world. Without at least the provisional assumption that psychical as well physical nature is subject to "the reign of law in everything and in every circumstance," no amount of phenomenal evidences, no range of human reasonings based on them, can do more than increase the prevailing confusions.

The facts ascertained in the investigation referred to provide a chain of "circumstantial evidence" which is, briefly, as follows. Born January 18, 1902, a Hindu girl grew up, married, gave birth to a son September 25, 1925, and died October 4 of the same year. The mother had been deeply religious, devoted to her husband, filled with intense and reverent aspirations and longings for the future of her little world, most of all for that of the child whose coming caused her own death. A year later, that is, on October 12, 1926, a daughter was born to another Hindu family living in another community and totally unacquainted with the family and events just described. This girl, now more than eleven years of age, is Shanti Devi.

The report recites that until four years old, Shanti Devi was "almost silent," but from then on began to talk more and more definitely and coherently of her "former life." She gave names, scenes, incidents, with the same apparent certainty that an ordinary child might manifest in speaking of its present existence. So absorbed and assured became Shanti Devi in her declared memories that at last her adult relatives felt moved to investigate—with the astonishing result that her memories were practically confirmed. The former husband was found, the former incidents verified. Then came the impartial investigation and report of the three Hindu examiners into the circumstances, which more than substantiated the original reports. It would be gratuitous to question the entire good faith of those concerned in the facts or their verifications. Despite all this, one can scarcely doubt that the average westerner will unhesitatingly pass adverse judgment, while in similar summary fashion the average oriental will as unhesitatingly assert that reincarnation is "proved" by the case of Shanti Devi.

Some comment on the case, as well from the simple standpoint of reason as from what is known of occult psychology, may perhaps be useful to students irrespective of any particular opinion or belief. First, then, it should become easily apparent that the present case hinges, not upon the fact or theory of reincarnation, but entirely upon the nature of memory. Who can deny that, of all the mental faculties, memory is at once the most depended upon and the most undependable, or that the sum-total of knowledge on the subject is almost entirely empirical, with no more known of its laws than of other mental powers? Who can doubt that, as compared with physical science, modern psychology is still in its swaddling-clothes? But taking simple facts, everyone is, or should be, aware of the tendency to run together first-hand experiences with what has been heard and read upon any given subject, so that in the course of time an ordinarily imaginative adult, let alone a child, will be unable to distinguish between fact and fancy. Again, surely everyone at all observant will long since have noted the ease with which whole audiences can be psychologized to the point where they are unable to distinguish what has been said from their own impressions. Finally, the records of modern hynotism supply numberless instances where the subject personates whatever character may be suggested by the operator, often acting out the part with entire fidelity. The same records offer abundant evidence that under hypnosis subjects display clairvoyance, clairaudience, a knowledge of verifiable incidents impossible to them in their normal consciousness.

Turn next to the field of religious experiences. The cases are literally numberless of those who have communed with gods, angels, disembodied "spirits" of every imaginable kind. Any number of these have been convinced of being "possessed" by a tutelary divinity, of being themselves an Incarnation of their God or their Devil. Aside from their unverifiable oracular utterances, whole volumes of testimony exist where statements in respect to mundane scenes and events, obtained in some inscrutable way, have been verified. Does all this warrant the inference or assumption that the experiencer of these phenomena himself understands them? And strange to consider as well as to say, these supernormal or subnormal experiences always tie in some unknown way with the convictions, the hopes, the longings, the normal memory and imagination of the percipient. One does not find a Catholic or other Christian saint or sensitive communicating with any of the numberless Hindu Devas, Pitris, Gods, etc., nor vice versa. Still more

strange is it that although these various seers and psychics may be well aware of the totally different scenarios of others, the fact makes no impression whatever on them. At the present time the numerous individual mouthpieces of transcendental beings are all busy with "communications" far more wonderful than anything recounted of Shanti Devi. Are their claims therefore to be accepted or rejected out-of-hand? Among theosophists, one for many years of world-wide reputation believed herself to have been Hypatia and Giordano Bruno and to have authentic memory of those former incarnations. Meantime it is as certain as anything can be that she was well aware that at least two others were making the identical claim, with as much apparent good faith and as substantiating "memory" as her own. There is no record that this contretemps in any way disturbed the equanimity of the several claimants. Consider in general that the convinced adherents of conflicting religions, of conflicting sects and seers in each, are in no wise disturbed by the fact of their conflicting revelations.

Modern Spiritualism overflows with psychological phenomena of similar tenor. The insane, the delirious, the intoxicated, present psychological states and phenomena often paralleling the exhibits of the kinds indicated. Finally, the dream-states and experiences of everyone afford first-hand psychological phenomena as baffling and as remarkable as any of those mentioned above. Most men dismiss their dreams as of no consequence—and this although many recorded dreams relate to mundane matters unknown to the normal consciousness though of great importance thereto. Surely, all that can here be only barely hinted at is worth following up by anyone who desires really to get at the truth behind these phenomena. Enough is known of facts; what is impellingly needful is an understanding of their laws. That knowledge is not to be had in any of the modern channels—hence the reasonableness of recourse to sources otherwise of the highest authenticity. In all these respects the writings of Mme. Blavatsky are of surpassing value, for they are filled with supporting documentation for her every statement of principles, laws, and processes—testimony that anyone can ignore, but that no one can dispute or deny except by setting up his personal opinion against the weight of the greatest characters in human annals. What should be by all recognized as at best but something *sub judice* is by far too many dealt with as if they were competent judges of both the law and the evidence.

What, then, of Shanti Devi simply as typical of many, very many similar cases where those who accept and those who reject do so

with no real comprehension of the factors involved? Perhaps in concluding this already over long but necessarily incomplete discussion, it may be worth while to state what Mme. Blavatsky has to say on the subject, and to call attention to the supporting authorities. First, then—

> . . . save in the case of young children, and of individuals whose lives were violently cut off by some accident, no Spiritual Entity can re-incarnate before a period of many centuries has elapsed, . . . (*The Secret Doctrine,* II, 303.)
>
> Reincarnation, *i.e.,* the appearance of the same . . . astral monad . . . is not a rule in nature; it is an exception, . . . It is preceded by a violation of the laws of harmony of nature, and happens only when the latter, seeking to restore its disturbed equilibrium, violently tosses back into earth-life the astral monad which had been tossed out of the circle of necessity by crime or accident. Thus, in cases of abortion, of infants dying before a certain age, and of congenital and incurable idiocy, . . . (*Isis Unveiled,* I, 351.)

On the principles here stated, and the facts reported, the case of Shanti Devi can be neither the reincarnation of a Spiritual Entity nor of an astral monad, *i.e.,* neither of the persisting individuality nor of the mortal personality. How, then, account for her memory and her assurance of identity?

Only by an understanding of what the Hindus and Buddhists alike call the twelve *Nidanas,* the first seven of which comprise the concatenation of causes which produce the "cycle of necessity," or Karma, which governs the unbroken series of reincarnations of the same Spiritual Ego. The last five of the Nidanas, otherwise called the *Pancha-Skandhas,* comprise the perishable "bundles" or "aggregates" which make up the Personality that average man believes himself to be. Except in the abnormal instances recited, no Egoic reincarnation can occur until the Skandhas of the preceding incarnation have been completely dissolved, and a new astral monad evolved. Memory, that is to say, human or personal memory, fades out with the Skandhas; hence the fact that normally no one whose sense of Self is personal has any "memory" of a former personality in which the present one had no part or lot. Egoic memory is in the Individual or Spiritual Self, and since the two forms of memory are normally as antipathetic as light and darkness, the activity of the one renders impossible the concurrent activity of the other. Otherwise put: no one can be awake and asleep at the same time, but in the intermediate transitional zone he may be in one or another dream-state. While in that state the

Ego is completely the victim of it. The ranges of dream-states are multiple and often occur in supposedly waking consciousness. Just as in magnetism there are permanent and temporary magnets, so in the magnetic field of the various states of consciousness.

The same sources (Hindu, Buddhist, and others) all point out that *conscious* memory of past lives is possible only as the culmination of the four grades of Adeptship—the condition of full Spiritual consciousness, called *Samma-Sambuddhi.* To achieve it, the physical, astral, psychic, and human memory has to be made entirely subject to the will of the Initiate. Thus, from this point of view, Shanti Devi is the victim, not the possessor, of *Tchitta-Riddhi-Pada,* "the step of memory," *i.e.,* its understanding control. She is a sensitive caught in the waves of the astral light, so that she "impersonates" the memories of the still coherent surviving pancha-skandhas of the dead mother, or—she is, still more unhappily, "possessed" from "the other side" in the same manner as a hypnotized subject, the only difference being (*a*) that the "operator" is invisible and unknown, and (*b*) that the hypnosis has so far proved permanent. The nature of the "possession" is such that it may be expunged either as she matures and some other and powerful human affection attracts her, or by the compassionate interest which her pitiable condition must excite in many, perhaps in some whose knowledge and whose Karmic relation may permit effective if unrecognized help.

Next month THEOSOPHY will print the account of a case in which, according to the evidence, a genuine instance of the exceptional reincarnation of an "astral monad" actually occurred.

INSEPARABLE CONTRARIES

Pleasure and Pain are represented as twins, as though they were joined together, for there is never the one without the other; and they turn their backs because they are contrary to each other.

If you shall choose pleasure know that he has behind him one who will deal out to you tribulation and repentance.

—LEONARDO DA VINCI.

HEREDITY AND ENVIRONMENT

MOST educators and sociologists regard heredity and environment as a pair of opposites, and the chief, if not the sole factors which determine the physical, mental and moral characters of the individual. These thinkers may be divided into two schools: those who hold that heredity is primary, and those who teach that environment is the greater influence. The various programs for individual and social betterment reflect these two positions. In the light of Theosophy, however, the problem of heredity versus environment is no more real than the problem of that other pair of opposites—the supposed irreconcilables, Science and Religion.

No thought can rise above the premises upon which it is based. If the premises are false, then all that flows from them must be full of error, as the stream of thought, like that of water, cannot rise above its source. The reasoning of the scholars of the world is on a one-life and one-plane basis, and such a premise invalidates all their syllogisms, for it is one of the fundamentals of logic that if the premises are false, the conclusion cannot be true. Once we postulate the two most important doctrines in the philosophy of Theosophy—Reincarnation and Karma—all difficulties are at once resolved and that which before was so baffling becomes as clear as the noonday sun.

Theosophy starts with the timeless Ego in man and the one homogeneous Substance-Principle in the Cosmos. These are One—the central point and the radical cause "from which all emerged, around and toward which all gravitates, and upon which is hung the philosophy of the rest." (*The Secret Doctrine,* I, 273.) Let us also consider one of Patanjali's Yoga Aphorisms: "For the sake of the soul alone, the Universe exists." Once we start with the Immortal Ego, then the whole of manifested existence, both visible and occult, constitutes the Soul's environment. From this point of view, what we regard as heredity is in reality an aspect of the Ego's environment. Both the external, objective aspect of environment and this inner aspect are the results of Karma—the Ego's reaping of causes sown in previous existences.

Since all is life, and since all space is filled with hierarchies of beings of every grade of unfoldment, the Soul's environment is a living one, filled with beings who are themselves souls in evolution. We influence them and they in turn react upon and influence us. This inter-

action between all beings determines the nature and quality of what the world calls heredity and environment. The laws of affinity and attraction are ever operative and we can draw to ourselves only that with which we have established a prior relationship, whether for good or evil. The Ego is the Creator, the Preserver, the Destroyer and Regenerator of his environment.

All the souls engaged in a particular field of evolution may be divided into two major groups, in line with the dual aspects of Spirit and matter which characterize all manifestation. In the "Spirit" group are all those Souls endowed with the light of mind or self-consciousness in any degree; and in the "Matter" group are the beings of the lower kingdoms, not yet having reached that stage where they are capable of embodying the Manasic light. The responsibility for the universal environment rests with *Spiritual* beings. It is these self-luminous and self-guiding Beings who impel from within without the evolution of their younger brothers in the lower kingdoms.

The Way to Harmony

The earth and all other constellations have their own life principle, which is none other than their own soul, which again is but a part of the World Soul. This creating World-Soul finds infinite delight in propagating infinitely graded forms of life; the object of these diverse expressions is to delight the mind, and call into manifestation an infinite number of ideas to make true the world of reason. For where there are variety and diversity, there are also gradation, order, system, harmony and concord, and in the harmony of the opposites rests the beauty of the whole. Of course there is harmony of parts, only in beholding the whole. Even the thinkable smallest has in the universe the highest destiny; viz., the task of subjugating itself as a part of the whole, that the whole may harmoniously balance and unite. Nothing in the universe is so small that it cannot add something to the keeping and perfecting of the highest. There is no evil for anybody or anything, which is not a good for somebody. To one who always considers the whole, nothing is hideous or evil, nothing inharmonious in its diversity.

—Giordano Bruno.

ON THE LOOKOUT

Retrospect

Nineteen-thirty-seven was witness to a profound unsettling of scientific ideas. In physics, the theorists are now considering the possibility that "instead of electrons, the smallest bits of matter, being all the same there are upward of 1800 different varieties, all differing in weight." (Los Angeles *Times*, Dec. 31, 1937.) This possibility, somewhat disturbing to the intelligibility of current theory, is indicated by photographs displayed by Prof. G. E. M. Jauncey of Washington University (St. Louis):

> They were electrons, shot out from radium E, which left their tracks on a photographic film.
>
> Dr. Arthur Compton of the University of Chicago, Nobel laureate and cosmic ray expert, looked at Dr. Jauncey's pictures and said they appeared to be well done scientifically. He did not commit himself on the new electrons, except to say that if verified, they are of great importance.
>
> The pictures indicated there may be electrons of weights ranging all the way from the old value up to the weight of protons, which are positive bits of electricity 1800 times heavier than electrons.
>
> Since the first pictures Christmas Eve Prof. Jauncey said virtually none of the Washington University physics staff has slept. Prof. A. L. Hughes, head of the department, W. A. Bruce and Dr. M. A. Starr have worked day and night on the sensational development.

The Beam in the Eye

The photographs were shown at a meeting of the American Association for the Advancement of Science at Indianapolis. Curiously, evidence opposing the conclusions of the St. Louis' scientists was presented on the same occasion by workers from the University of Michigan who had, quite independently, reversed the methods used at Washington University, thereby obtaining opposite results.

Whatever final significance, if any, may be placed in these experiments by scientists, it should be immediately evident that the method of experimentation may have far more to do with the observed phenomena than any intrinsic properties of matter. To suppose that some sort of "reality," independent of the instrumentation of research, will ultimately be discovered by physical science is a most "unscientific" folly. So many "angles" or modes of vision, so many "fundamental building-blocks of the Universe" will be disclosed.

Good-Bye to "Genes"

In biology long respected views of the mechanism of heredity have lost much of their odor of sanctity. Prof. Richard Goldschmidt of the University of California now charges that the "gene" is a fiction, describing experiments which in his view make it theoretically unnecessary. (New York *Times,* Dec. 5, 1937.) The "gene," like the atom, never has been and never will be seen by scientific observers; yet, as the *Times* writer remarks:

> . . . its existence has been universally accepted by the scientific world as the means by which hereditary characteristics are transmitted from parent to offspring in the entire realm of nature, plants and animals. Its existence was postulated, just as the existence of the atom in the world of physics has been postulated, on the basis of a large array of experimental evidence, which could be best explained only on the supposition of special hereditary units, named genes, so minute that they could not be seen even under the most powerful microscope.
>
> In fact, it was on the basis of experiments in the inheritance of millions of fruit flies from which Professor Thomas Hunt Morgan of the California Institute of Technology worked out the hypothetical arrangements of the invisible genes inside the chromosomes of that insect's germ-cell that the theory of the gene became so universally accepted, winning for Professor Morgan the Nobel Prize in Medicine in 1933.
>
> Professor Goldschmidt's conclusions that the gene has no existence thus strikes at the very cornerstone of the present universally accepted theory of genetics. If these conclusions are accepted they will necessitate a revamping of the established ideas on genetics and heredity. They would also have an important bearing on experiments in protein chemistry and evolution.

Chromosomes "Demoted"

One wonders what university instructors in genetics will now tell their students about the highly scientific "gene-maps." Prof. Goldschmidt, however, is still loyal to the chromosome. In this he differs from Dr. Ethel Browne Harvey, of Princeton, who has disclosed that even chromosomes are unnecessary to the early development of an embryo. (New York *Times,* Nov. 27, 1937.) The orthodox theories of reproduction hold that all creatures, from the lowest forms of organic life to the human organism, develop from a single cell—the maternal egg. This cell cannot begin its division and multiplication until it has been fertilized by a male cell or sperma-

tozoon. The nucleus of the egg contains a specific number of chromosomes, so also the nucleus of the sperm cell. The process of fertilization involves the union of the male and female chromosomes through which the heredity of the parents is combined in the new organism then in the process of "becoming." Dr. Harvey, however, reports that an egg cell may be made to multiply, first, without fertilization by the sperm cell; second, without chromosomes. She removed the nucleus (including the chromosomes and hypothetical "genes") from the egg of a sea urchin, artificially fertilized it with sea water, and then observed this "non-nucleate fraction" cleave and multiply to a group of about 500 cells, forming a fairly normal blastula (early embryonic form). Dr. Harvey comments on the significance of her discovery:

DIFFICULTY WITH "ACCEPTED IDEAS"

> The early stages of development can, therefore, take place without chromosomes. This means that the maternal cytoplasm is of great importance and has within itself the potentialities of determining at least the early stages of development.
>
> These potentialities must either (1) be given to the cytoplasm by the nucleus previously, or (2) be innate in the maternal cytoplasm and entirely non-nuclear. They might be given to the cytoplasm either at the time of the breakdown of the germinal vesicle, or else earlier by the chromosomes of a preceding generation.
>
> The supposition that the potentialities of early development are innate in the cytoplasm restricts inheritance by genes to later developmental stages, and it may very well be that only the more specific and differential characters are controlled by the genes, whereas the general and fundamental characteristics of living matter are cytoplasmic.
>
> However, if further work shows that the development of the parthenogenetic merogones does not stop with the blastula, but that they will develop to further stages, the results will be difficult to harmonize with the accepted ideas of the mechanism of genetical inheritance. . . . Any difficulty in development seems to be mechanical rather than structural. No particular type of visible and movable granules seems essential to development. These must be concerned with metabolism and respiration.
>
> It must therefore be the "ground substance" which is the material fundamental for development—the matrix which is not moved by centrifugal force and which, in the living egg, is optically empty.

Where is the pattern for this growing embryo concealed? Will biologists look in the molecular interstices of an "optically empty" egg? With "genes" non-existent, chromosomes non-essential—at least during the primary stages of development—there is practically nothing left to account for morphogenesis—except, of course, the astral body.

An "Elusive Problem"

A thoughtful worker in genetics, Prof. Edmund W. Sinnott, a year ago (*Science,* Jan. 15, 1937) sensed the superficiality of descriptive morphology:

> The results of physiological research have tended to emphasize the complexity rather than the simplicity of protoplasm and have entirely failed as yet to solve the elusive problem of what an organism really is. A similar frustration has attended still another line of attack, through the science of genetics. Ever since the rediscovery of the Mendelian principles of heredity, this discipline has been enthusiastically pursued by many students who felt that here, at last something fundamental in biology had made its appearance. The truly sensational development of the chromosomes theory with its demonstration that the genes are definite physical entities [!] occupying constant positions in the chromosomes[!!], has justified this early enthusiasm; but with their first major objective attained, geneticists are coming to realize that their really basic problem is not the location and transmission of genes but the mechanism by which these control the development of an organism, a question about which our ignorance is almost complete. . . .
>
> Especially let us hope that those younger botanists and zoologists who choose to devote themselves to the problems of organic form may realize that these can not be set apart as a static compartment of biological thought but must touch and illuminate the whole. May they help to resolve for us this fundamental paradox: that protoplasm, itself liquid, formless and flowing, inevitably builds those formed and coordinated structures of cell, organ and body in which it is housed. If dynamic morphology can come to the center of this problem, it will have brought us close to the ultimate secret of life itself.

Correspondence and Analogy

Students familiar with the teaching as to evolution in the early rounds and of the human organism in the first races on this globe, should find suggestive correspondences between the development of the germ cell and the evolution of the human form. In *The Secret*

Doctrine (II, 116, *et seq.*), H. P. B. employs the segmentation of the germ cell as an illustration to explain the condition of the early races in this round. Later (151) she says that "primeval humanity had at first an ethereal—or, if so preferred, a huge filamentoid, jelly-like form, evolved by gods or natural 'forces,' which grew, condensed throughout millions of ages, and became gigantic in its physical impulse and tendency, until it settled into the huge, physical form of the Fourth Race Man." Some twenty-five million years ago, she suggests, the "human" form was "a thoroughly homogeneous particle of albumen in a firmly adhesive condition,"—" 'an organism without organs,' an entirely homogeneous substance with a structureless albumen body within, and a human form only outwardly." (154.)

DESCENT INTO MATTER

It may well be, as Dr. Harvey suggests, that such specialized functions as may be performed by the chromosomes do not come into activity until a later stage in the morphogenetic process. Every evolution of form consists of a gradual descent from the astral plane. We should have no difficulty in seeing the reason why modern biology finds the first steps in the growth of an organism so hard to explain in terms of objective process and cause. "There are," says H. P. B., "precise domains wherein the astral merges into physical evolution." (*S. D.*, II, 257.)

THE ANCESTORS OF MAN

In anthropology, the dogma of ape-origin finds fewer and fewer followers. The modern view is summarized by an editorial in the New York *Times* (Dec. 19, 1937):

> No comparative anatomist now holds that man is descended directly from some anthropoid ape. The early Chinese, the Dawn Men of Java, the Rhodesian men of South Africa, of whom we have been reading for the last few years, are not "missing links." Both apes and men probably sprang from a common ancestor. According to one theory, that common ancestor lived before the great ice ages in the Pliocene about 5,000,000 years ago, a mere geological yesterday; according to another, the family tree split in the Eocene fully 50,000,000 years ago, to give rise on the one hand to lemurs, the great families of monkeys and the anthropoids, and on the other to our own ancestor. No matter which theory we accept, the quest is now for the progenitor of both anthropoid and human stocks.

Future Human Evolution

The writer comments significantly that "as a species we are highly unstable—proof that Nature is still dissatisfied." In this connection it may be observed that the idea that our evolution is far from finished finds frequent expression in modern theory. This is perhaps a vague intuition of the reality behind the utterance of H. P. B. in the Preface of *Isis Unveiled:*

> We accept the saying of the gifted author of *Festus,* that the human heart has not yet fully uttered itself, and that we have never attained or even understood the extent of its powers. Is it too much to believe that man should be developing new sensibilities and a closer relation with nature? The logic of evolution must teach as much, if carried to its legitimate conclusions. If, somewhere, in the line of ascent from vegetable or ascidian to the noblest man a soul was evolved, gifted with intellectual qualities, it cannot be unreasonable to infer and believe that a faculty of perception is also growing in man, enabling him to descry facts and truths even beyond our ordinary ken.

Inevitably, scientific writers with their background of materialism are unable to conceive of a forward step for men except in terms of some structural change in the physical organism. Theosophists, however, while recognizing that a further incarnation of the Manasic, or thinking principle, will undoubtedly induce certain modifications of body—particularly, perhaps, in the brain—know that the change nature has in store for the human species is fundamentally psychic or intellectual and moral in character. Already anticipatory glimpses of the coming metempsychosis have been accorded scientific observers, and as the new cycle gathers momentum the lingering materialism of the present will finally disappear, never to return.

Sunspot Astrology

While some astronomers regard the theory that human affairs are influenced by sunspots as more or less "guesswork," Dr. Harlan True Stetson, of Harvard and M. I. T., has assembled some facts of vast implication on this subject. A dispatch in the Los Angeles *Examiner* (Nov. 17, 1937) provides eleven points excerpted from his new book, *Sunspots and Their Effects:*

> 1. Business fluctuates up and down in more or less regular cycles of about ten years.
>
> 2. Sunspots fluctuate in numbers and in intensity in more or less regular cycles of a little over a decade's duration.

3. With variations in sunspots, the sun is known to vary the quantity and quality of its radiations sent to the earth.

4. Variation in radiation, particularly in the ultra-violet, is known to be capable of profound biological and physiological changes (effect on plants and animals, including human beings).

5. Variations in ultra-violet light of the sun are known to be accompanied by changes in the earth's atmosphere.

6. Changes in the atmosphere, and the electrical ions, have been found by some scientific workers to be accompanied by biological and physiological changes.

7. Certain plants increase their vitamin contents when exposed to ultra-violet light.

Vitamins and ultra-violet light play an important part in physiological functioning, particularly as regards the endocrine glands.

9. Moods of human temperament are closely associated with the secretion of the endocrines.

10. Buying and selling waves with corresponding fluctuations in commodity prices will reflect confidence or anxiety moods of the public.

11. Variations in the quantity and quality of sunshine may be indirectly but nevertheless definitely associated with moods of optimism and pessimism.

THE EARTH'S AURA

According to present scientific calculation, the peak of sunspot activity will be reached this year. The widespread study of sunspots was largely stimulated by the discovery that radio signals fade coincidentally with the phenomena. Investigation revealed that the upper atmosphere, called the "ionosphere," — the earth's electrical envelope in the form of a spherical shell filled with ions or electrified particles—is extremely sensitive to solar activity. This layer of atmosphere has three well-defined strata, the first beginning at about sixty miles above the surface of the earth, while the outer region is at a height of 180 miles. John J. O'Neill, science editor of the New York *Herald-Tribune* writes simply of the function of the ionosphere (Oct. 24, 1937):

> One of the direct effects on the earth of the sunspots, the cycle of which is now nearing its maximum stage, is the production of surges in the electrical atmosphere that surrounds the globe like an aura. This charged envelope is due largely to the invisible light which is produced by the sun in an immense quantity, and which increases when the sunspots increase. This electrical envelope is a highly beneficial structure. Without it

> all life would be wiped out. It shuts out the ultraviolet light that creates it, which would burn up every living thing on the earth if it reached the surface. It also provides an electrical mirror which makes possible radio communication over long distances. Without it radio waves would escape into space instead of traveling around the earth.

The cause and significance of sunspots is explained in *The Secret Doctrine,* I, 541. As to the ionosphere, statements on pages 142, 583 and 625 of volume I, should be studied.

An Inverted View

Dr. Stetson may be the prophet of a new school of *scientific* astrology, for if human affairs, as he suggests, are affected by changes in the sun, it is but a step to the theory that we are exposed to all manner of cosmic and planetary influences. However, speculation that solar radiation may have a bearing on our psychic life is always in terms of repercussion of physical influences. Not until the occult doctrine of *spiritual* influences is adopted, if only as a working hypothesis, can there be real understanding of the earth's cosmic relationships.

More "Warning" for the Church

The editors of *Harper's* Magazine introduce in their December 1937 issue, an article, "An Observer Warns the Church," by Rollo Walter Brown, with the following observation:

> Sometimes we weary of the succession of manuscripts in our daily mail criticizing harshly the men of God and their shortcomings. But now and again there comes an article which by its friendliness and understanding as well as by its exaltation of feeling, seems to set itself apart from the chorus of indiscriminate fault-finding.

Despite Mr. Brown's protestations of friendliness, his "understanding" is so penetrating that few followers of orthodoxy could regard him as a friend. He remarks:

> Instead of being content to touch all people with a great reverence for life that would mean peace—at least more peace—among men, and in consequence a high security for any church that was spiritually sound, instead of restricting itself to acts of mercy and kindliness when nations do fight, the church must give its high sanction to wars; it must take sides in them; it must give itself and its houses of worship over to perverting the religious motive into a fighting motive; it must offer up thanks when hundreds of thousands of its own members have been

blown to mincemeat, provided only that more of the enemy have suffered the same fate. That is bringing in the kingdom of God.

In a hundred important ways the Church has substituted the cowardly, cruel, and self-destructive methods of organization and mass action for the quietly penetrating spirit of Jesus.

QUESTIONS AND ANSWERS

The "friendly" questions asked by Mr. Brown are unanswerable. What has become of the philosophy of Jesus? Does the Church influence men in their individual lives to be charitable? — to strive for the human solidarity that Jesus taught? But Mr. Brown does not wait for an answer:

These questions seem absurd when applied specifically to the life of the hour. Pennsylvania and Ohio and Michigan and Illinois are full of churches of all denominations. If the several millions of members of these churches had experienced the transforming touch of any high perfection, if they had felt deeply the cry of Jesus about our common destiny, industrial war in their own towns and murder on their own doorsteps would be not merely unnecessary but unthinkable. Spain is full of churches. Yet it must be the perfect instance of what Thomas Hardy wrote for Christmas Day, 1924:

"Peace upon earth!" was said. We sing it,
And pay a million priests to bring it.
After two thousand years of mass
We've got as far as poison-gas.

RELIGIOUS "POMP AND CIRCUMSTANCE"

Again:

Just what would Jesus think of the spectacle of a military memorial mass in the Harvard football stadium, with photographs flashed over the country that look like nothing so much as a Hitler review, and with reports dramatically telling how the quiet of the Sunday morning air was rent by the roar of cannon announcing consecration? Does it not seem much more probable that he would encourage his followers to divest themselves of all the trappings of the world and bow quietly, humbly down, and weep that so many of the young and eager should have been required in the sacrifice? But that is not what the church today leads men to do.

THE LESSON OF HISTORY

This writer, unfortunately for the Church, understands all too well the nature of religions:

The church has arrived at the stage of crisis in the sequence through which any organization founded to perpetuate an idea inevitably passes. An idea originates with an individual. Because it came naturally from the depths of his experience, he sees it with great clarity. He is so much influenced by its power that he has to proclaim it. His high seriousness, his rapturous enthusiasm bring him disciples. They likewise must go out and share what they have found. But the idea is new and, therefore, to many people seems wrong. The disciples encounter apathy; they encounter overt enmity. In order that their idea may overwhelm all opposition they organize it. They must make the organization strong so that the idea may never be in danger. Developing such an organization requires endless attention. So they—or their followers, in turn—become so much occupied with organizing that they forget the idea the organization was intended to perpetuate. The idea is gradually covered over with a smothering incrustation of all kinds of heavyweight machinery.

Origin of Religions

The most pertinent comment that can be added to this analysis of the present state of religion is found in the words of H. P. Blavatsky, printed in *Lucifer* for November 1888 under the title, "Is Theosophy a Religion?":

> There is not a religion worthy of the name which has been started otherwise than in consequence of such *visits* from Beings in the higher planes. . . .
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> The Revealer, the artist who impressed a portion of the Truth on the brain of the Seer, was in every instance a true artist, who gave out genuine truths; but the instrument proved also, in every instance, to be *only a man.* Invite Rubenstein and ask him to play a sonata of Beethoven on a piano left to *self-tuning,* one half of the keys of which are in chronic paralysis, while the wires hang loose; then see whether, the genius of the artist notwithstanding, you will be able to recognize the sonata. The moral of the *fabula* is that a man—let him be the greatest of mediums or natural Seers—is but a man; and man left to his own devices and speculations *must* be out of tune with absolute truth, while even picking up some of its crumbs. For Man is but a *fallen* Angel, a god within, but having an animal brain in his head, more subject to cold and wine fumes while in company with other men on Earth, than to the faultless reception of divine revelations.
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> Hence the multi-colored dogmas of the churches. Hence also the thousand and one "philosophies," so-called (some contradictory theosophical theories included); and the variegated

"Sciences" and schemes, Spiritual, Mental, Christian and Secular; Sectarianism and bigotry, and especially the personal vanity and self-opinionatedness of almost every "Innovator" since the mediaeval ages. These have all darkened and hidden the very existence of TRUTH—the common root of all.

A REAL SCIENTIST PASSES

Sir Jagadis Chunder Bose, India's foremost scientist, died Nov. 23, 1937, at the age of 78, terminating a long life of service to true Science and devotion to the Vedic ideal of the One Life. A full and appreciative obituary was printed in the New York *Times* (Nov. 24). Sir Jagadis first shook the scientific world in 1901 with his demonstration of electrical rhythm in plants, called the "heart-beat" theory. His experiments showing the identical nature of physiological reactions in plants and animals brought him a fellowship in the British Royal Society. The *Times'* writer observes:

> Among his own people Sir Jagadis retained for most of his life an almost legendary significance, for they saw in the results of his experiments an affirmation of the old Hindu religious theory of Prana, the One Ultimate Life Force permeating all nature, from the inanimate to the animate.

"THE SENSITIVE PLANT"

For the past twenty-five years the work of Dr. Bose was confined to a study of what he called "the nervous system of plants."

> His experiments showed that plants are sensitive to touch, to a passing cloud, to bad air—in fact, to practically every stimulus to which animals are sensitive, with the exception of sound. He found that plants react to poisons and drugs, become excited and fatigued, and that when they die they do so with a spasm and with the emission of a measurable electric voltage at the instant of death. There is no life reaction in the highest animal, he contended, that has not been foreshadowed in the life of the plant, and he concluded that plant and animal are "a multiform unity in a single ocean of being." . . . In 1902 he published the results of his researches in a book, "Responses in the Living and Non-Living," in which he described experiments which showed that fundamental properties of animal life were shared not only by plants, but also by minerals. His chart of the responses of tin to stimulus was mistaken by an eminent physiologist for a chart of muscular movements. He showed the effects of alcohol and chloroform on a piece of platinum. All this, it must be added, aroused endless controversies and hostilities among the scientists of the Western world, especially among the physiologists.

> Setting aside his investigations on metals, he devoted himself to demonstrating the striking likeness between plants and animals and establishing to the satisfaction of various scientific bodies the presence in plants, and especially in the "sensitive plant," of a "nervous system," of "muscular" activity, which suddenly folds the leaves when they are touched; of the circulation of sap, closely analogous to the circulation of the blood, and many other striking similarities.

From 1885 to 1915 Sir Jagadis was Professor of Physical Science at the Presidency College, Calcutta. He was knighted in 1917 and in that year retired to found the Research Institute which bears his name. A member of leading scientific groups and the author of many books and articles, Dr. Bose did much to win from western scientists and philosophers a long delayed appreciation and respect for the eastern viewpoint. His efforts to demonstrate "the one inner life of all beings" by empirical proofs acceptable to western thought should be recognized by all students as an important service to the Theosophical Movement.

Without Benefit of Vacuum Tubes

The following dispatch appeared in the New York *Times* of Nov. 9, 1937:

> Professor E. G. Boring, director of the Harvard psychological laboratory, said today that S. Smith Stevens, an instructor, could receive radio programs by filling one ear with salt water, inserting a piece of wire into the water and strapping a second piece of wire to another part of his body.
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> Mr. Stevens could receive musical programs but could not distinguish announcements, Professor Boring said. He explained that energy carried into the ear by the wires caused hairs in the inner ear to vibrate.
>
> Mr. Stevens . . . is specializing in sensitivity of the human ear and its powers of generating electricity.

That this instructor is able to receive radio programs with virtually no apparatus does not surprise Theosophists; on the contrary, they regard the phenomenon as simply a demonstration of the infinite sensitivity of the human instrument, a correspondence of what Dr. Bose has shown with respect to the plant kingdom.

True Education

A pageant commemorating Horace Mann Day (Nov. 9) has been written and enacted by the students of the Horace Mann School, New York. (New York *Times,* Nov. 7, 1937.) The significance of this drama lies in its early scenes, which place modern

knowledge in its proper relation to that of the ancients. The pageant is called, "Those Who Bear the Torch." The first episode, depicting the death of Pythagoras, is symbolic of "Discovery." Later, a scene involving Galileo is titled "Rediscovery." It is good to know that high school students now learn that Galileo but revived and carried on the work of the Pythagoreans. One of the chief objections to modern texts on science is their failure to show that the early scientists of Europe were almost all students of the ancients and in many cases were themselves mystically inclined.

"A MEMOIR OF AE"

John Eglinton's volume with this title, just published by Macmillan & Co., should serve to introduce to the new and recall to the older generation of theosophists the name of George William Russell. The contents of the book will do much more than this, for now that he is no longer living, his words and moods are so presented that AE seems more lucent in verse and converse than in the flesh—as indeed he more and more became during the latter half of his human career.

Early in the '90s of the last century he and Charles Johnston, Dan Dunlop, and W. B. Yeats were the ensouling elements of the Dublin Lodge of the Parent theosophical society. They were coworkers in the production of *The Irish Theosophist,* a kind of return migration of birds of passage after long absence to the Erin which no longer existed except in tradition. AE never lost his love and loyalty for H. P. Blavatsky and Wm. Q. Judge. Of the latter he wrote in 1932: "Judge was the most impressive man I ever met, not by any air of dignity but simply from what he was." In several places Mr. Eglinton remarks of the profound influence exerted by Mr. Judge on AE. His nature, however, was like to that of the wandering bards, and he, as the troubadours of the medieval period, found earthly life ill-set to the music of the spheres. The two elements of his life, the sentient and the supersensuous, were by Karma bound back to back as in old Egyptian tablets, so that the one and the other were never in unison. Thus his impress on the Movement and the times was evanescent, wishful rather than willful, like a harper none too sure of his harp or his welcome. He therefore belonged already to tradition and to the future rather than to the present, even during his life. Yet, AE served and will serve those whose inner ears are tuned to the melody more than to the meaning of the Song of Life.